

109. In the Násik Division Rs. 57-4-6 was paid for the cutting of creepers in the heavy forests of the Peint Range, about 7,268 acres having been worked over. And the eradication of prickly-pear (*Opuntia dillenii*) was undertaken in forests of the Kalvan and Niphád ranges, wherein 860 acres were freed of this nuisance, making room for a better growth of timber, at a cost of Rs. 791-10-6.

110. In the Poona Division gangs of 6 or 8 men were working at prickly-pear eradication, each gang under a forest guard; and about 83 acres and 25 gunthas of forest lands, densely covered and shut up by it, were cleared in the Junnar, Indápur, Haveli, Dhond, Purandhar, Sirúr and Bhimthadi ranges. The prickly-pear, after being cut up and rooted out, was buried in natural rifts in the ground, and where these did not occur it was stacked in large heaps 10' x 10' x 8' to decompose, when it was burnt.

111. In the Sátára Division an expenditure of Rs. 132-15-0 was incurred in cutting down and uprooting prickly-pear (*Opuntia dillenii*) in the Tásgaon Range: but each forest guard with his koita or bill-hook severed creepers, and dug up young prickly-pear in the forest of his beat.

112. In the Sholápur Division, where the prickly-pear (*Opuntia dillenii*) was too heavy for the forest guards to cope with unaided, hired labour had to be employed in its destruction, and about 480,585 square feet were cut out at a cost of Rs. 784.

113. The account of prickly-pear removal may possibly not come properly under the designation "Other operations for the improvement of the growing stock," and it might seemingly more appropriately be termed an operation to make room for growing stock, but it has been entered here, as no other sub-heading has been provided for it.

114. No girdling-operations have been undertaken in any division of the Circle, either for the improvement of the forests, or to facilitate the removal of timber, or to season it on foot at the risk of heart shakes.

(5). *Experiments.*

115. Seeds of *Terminalia chebula*, hirda, the valuable myrobalan of commerce, obtained from the Southern Marátha Country, were sown in the Sátápuda hill forests of Khándesh, where the tree is at present unknown, but there has not been sufficient time for germination, as the seed often remains underground for over twelve months before the young seedlings appear. The tree is common in Central India on the high lands of the Sátápudas, and it ought to do well in the Sátápudas of Khándesh.

116. Seeds of Sind bábul were obtained from the Conservator of Forests, Sind, and were sown in the river-side bábul forests in several divisions of the Deccan; no less than twenty bags were thus sown in the Trans-Purna and other forests in East Khándesh; the tree does remarkably well in the Presidency proper.

117. Seeds of sal, *Shorea robusta*, which the Conservator of Forests, Central Provinces, Jubbulpur Circle, had kindly supplied, were distributed to all Divisional Forest Officers and were sown in June 1893, in selected forest areas in all divisions; it is reported that they have germinated rather sparsely.

118. The following kinds of seeds were procured, through the kindness of the Inspector-General of Forests, from Upper India, and were sent to the Divisional Forest Officers of Násik, Poona and Sátára for experimental sowing on high altitudes in their divisions; the seeds were sown chiefly in the Lingmalá nursery of the Mahábaleshvar Range:—

— Pinus longifolia.
Do. excelsa.

and seeds of—

Eucalyptus globulus.
Do. rostrata.
Do. piperita.
Cupressus toralosa.
Do. cashmeriana.
Acacia dealbata.
Do. melanoxylon.

which had been indented for upon the Conservator of Forests, Southern Circle, Madras, and which had been very kindly supplied, were likewise sent to all Divisional Forest Officers for cultivation in selected forests of their respective divisions.

119. As the anjan, *Hardwickia binata*, seeded very freely in Khándesh during the year, advantage was taken of the opportunity to send from that district considerable quantities of its seeds to the Deccan districts of Ahmednagar, Poona, Sholápur and Sátára, where the tree has not yet been introduced, for sowing in the dried forests, and innumerable seedlings have resulted from this operation: in the Bhámburdá reserved forest near Poona the young anjan plants are very plentiful and healthy.

120. No further experiments have been made with the date palm, the libi dibi and mahagoni, &c.; a few young trees of these kinds remain here and there, the relics of experimental sowings made in past years.

(d). EXPLOITATION OF MAJOR FOREST PRODUCE.

(1). *Clear or Regeneration Fellings.*

121. In the East Khándesh Division a clear felling of trees was made in the river-side portion of the Trans-Purna reserved forest, where the bábul (*Acacia arabica*) is the predominating tree. One compartment of about 97 acres was thus exploited departmentally. Some disforested lands at the foot of the Sátputa hills in the Yával and Chopda ranges were cleared of all trees, not with a view to regeneration, but to the land being utilized for cultivation; about 3,572 acres were thus cleared, and they yielded large quantities of firewood which was bought mostly for steam cotton factories at Chopda.

122. In the West Khándesh Division a compartment in the Ubhand forest of the Nízampur Range was exploited under this system, the principal species being kheir (*Acacia catechu*) and kanchar (*Acacia amara*). The coupe was subsequently thickly sown up with seeds after the ground had been prepared for their reception.

123. In the Násik Division the teak and other trees in the dalhi numbers of 8 villages in the Kalvan Range and of 1 in the Báglán Range; the teak trees on occupied lands in 13 villages of the Peint Range which were felled and removed by their purchasers; and the departmental firewood fellings in the Somthána reserved forest of Yeola Range, in the Dongrála and Wanput forests of the Málegaon Range, and in the Mulána forest of Báglan, were all clear-fellings; those made in reserved forests were subsequently followed by sowings of seeds in the coupes for reproduction.

124. Of the Ahmednagar Division most of forests in black soil lands on the banks of rivers in the champaign country, wherein the chief tree is the bábul (*Acacia arabica*), have been divided into 62 forest blocks, and these have, each, been sub-divided into 40 compartments, and one compartment is made into the coupe of the season, wherein the standing stock is sold by auction for the purchaser to fell and remove at his own expense, within a fixed period of time, under prescribed conditions; 27 of these coupes situated in forest blocks extending over lands of 29 forest villages distributed over 8 ranges, representing a total area of nearly 178 acres, which were found to contain 17,024 trees, estimated to yield 56,043 cubic feet of firewood, sold for Rs. 1,902-8-0—a very moderate price, but at the same time not unsatisfactory, seeing that the system is new, and private enterprise in exploiting forests is still in its infancy, and will develop with time.

125. Similarly in the Poona Division, 52 coupes in river-side reserved forests, giving an acreage of 201½ nearly, and containing 17,692 trees, of an estimated yield of 144,991 cubic feet of firewood, sold for Rs. 6,525-12-0. The exploited coupes were then fenced with thorns, or wire, and were either fully ploughed over, or ploughed in lines 5 or 10 feet apart, according to their circumstances, and were sown with bábul and other seeds.

126. In like manner in the Sholápur Division ten compartments, of which 6 were in the Sholápur, 2 in the Mádhe, and 1 in the Pandharpur ranges, of